SG - 238V

The SG – 238V photointerrupter high – performance standard type,combines high – output GaAs IRED with high sensitive phototransistor.

FEATURES

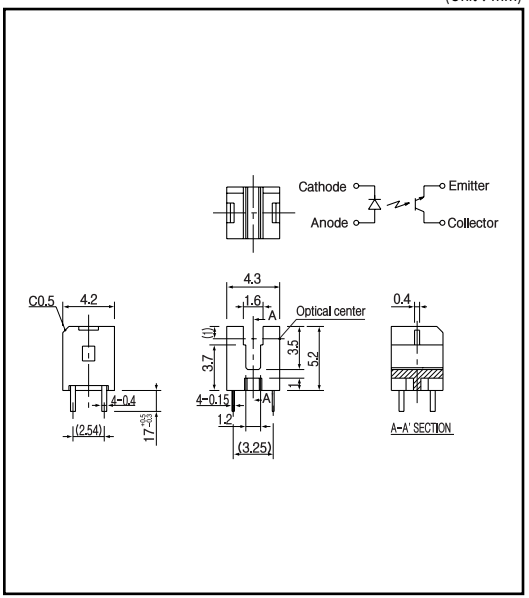
- PWB direct mount type
- GAP ：1.2mm
- Compact

APPLICATIONS

- Cameras
- Video cameras
- Floppy disk drives
- C D – ROM drives

DIMENSIONS

(Unit : mm)



MAXIMUM RATINGS

(Ta=25℃)

Item		Symbol	Rating	Unit
Input	Power dissipation	P_D	75	mW
	Forward current	I_F	50	mA
	Reverse voltage	V_R	5	V
	Pulse forward current *1	I_{FP}	0.5	A
Output	Collector power dissipation	P_C	75	mW
	Collector current	I_C	20	mA
	C - E voltage	V_{CEO}	30	V
	E - C voltage	V_{ECO}	5	V
Operating temp.*2		Topr.	- 20 ~ +85	℃
Storage temp.*2		Tstg.	- 30 ~ +100	℃
Soldering temp.*3		Tsol.	260	℃

*1. pulse width ：tw≦100 μsec.period ：T=10msec.
*2. No icebound or dew *3. For MAX.5 seconds at the position of 1mm from the package

ELECTRO-OPTICAL CHARACTERISTICS

(Ta=25℃)

Item		Symbol	Conditions	Min.	Typ.	Max.	Unit.
Input	Forward voltage	V_F	I_F=20mA		1.2	1.4	V
	Reverse current	I_R	V_R=5V			10	μA
	Peak wavelength	λp	I_F =20mA		940		nm
Output	Collector dark current	I_{CEO}	V_{CE}=10V		1	100	nA
Transmissive	Light current	I_C	I_F=10mA, V_{CE}=5V, Non- shading	0.25		2.5	mA
	Leakage current	I_{CEOD}	I_F=10mA, V_{CE}=5V(shading)			10	μA
	C - E saturation voltage	$V_{CE(sat)}$	I_F=10mA, I_C=0.03mA			0.4	V
	Rise time	T_1	V_{CC}=4.4V, I_F=15mA, R=100kΩ			125	μsec.
	Fall time	T_2				1200	μsec.

Photo interrupters(Transmissive)

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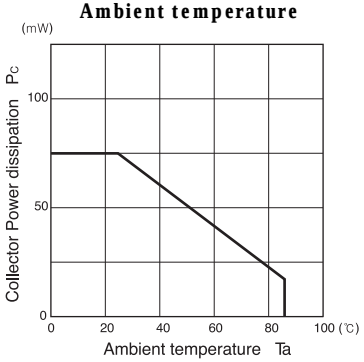
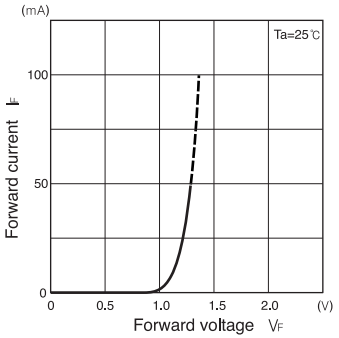
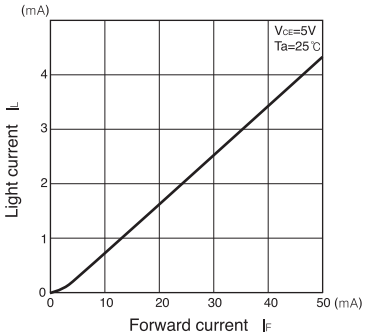
Collector power dissipation Vs. Ambient temperature



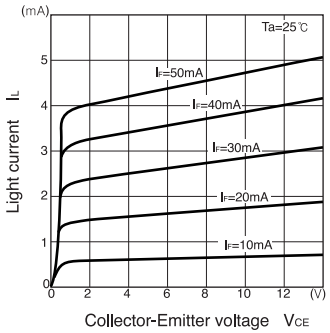
Forward current Vs. Forward voltage



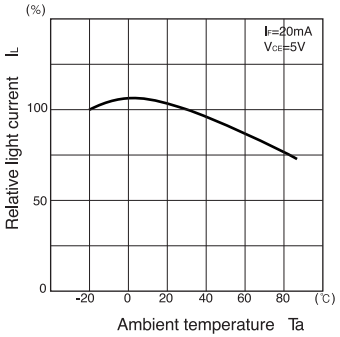
Light current Vs. Forward current



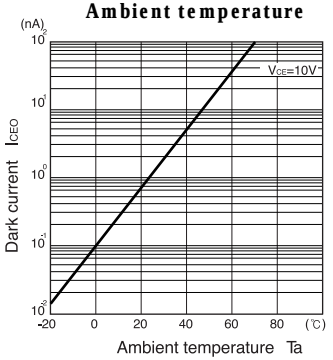
Light current Vs. Collector-Emitter voltage



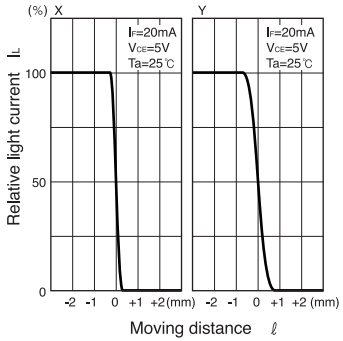
Relative light current Vs. Ambient temperature



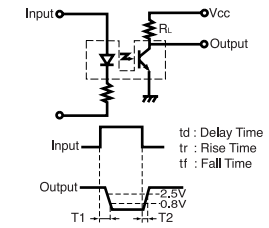
Dark current Vs. Ambient temperature



Relative light current Vs. Moving distance



Switching time measurement circuit



Method of measuring position detection characteristic